

REMARKS

This communication responds to the Office Action of May 15, 2007, wherein the Examiner rejected claims 21-22 under 35 U.S.C. § 112 and rejected claims 1-22 under 35 U.S.C. § 103(a). The Examiner indicated claim 23 is drawn to allowable subject matter. The Applicants herewith respectfully request reconsideration of the claims.

Rejection under 35 U.S.C. § 112

Claims 21-22 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claim 21 has been amended herewith to clarify that feeding a daily ration to a pig may comprise “feeding a first daily ration to a pig during a first phase, feeding a second daily ration to a pig during a second phase, and feeding a third daily ration to a pig during a third phase, wherein at least one of the first daily ration, the second daily ration, and the third daily ration is different from the other daily rations in weight percent of hydrogenated poultry fat.” Claim 22 has been amended to clarify that, in the claimed embodiment, “the weight percent of the hydrogenated poultry fat decreases from the first daily ration to the second daily ration to the third daily ration.” The Applicants thus respectfully submit that the rejections under 35 U.S.C. § 112, second paragraph have been overcome.

Rejection under 35 U.S.C. § 103(a)

Claims 1-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Livingston (US Patent 6,033,716) and Johnston (US Patent 5,498,434) in view of admitted prior art in the specification at page 1, paragraph [002] and Cook (US Patent 5,851,572) and further in view of Evans et al. (US Patent 5,427,802) and Schaub (US Patent 5,215,766) taken with Swine Diet Recommendations (1994, downloaded from <http://www.aces.edu/pubs/docs/A/ANR-0639>) and Practical Swine Feeding Ideas (1995, downloaded from http://www.animalgenome.org/edu/PIH/prod_growing.html).

Claim 1 is directed to a method of raising finishing swine and producing quality pork belly products. The method comprises, in part, “feeding a daily feed ration to a pig, the daily ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat.”

Claim 9 is directed to a method of feeding an animal. The method similarly comprises, in part, "feeding the animal a daily feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat."

Claim 16 is directed to a feed ration for feeding finishing swine. The feed ration comprises, in part, "0.5 to 5 percent by weight hydrogenated poultry fat."

None of the references -- Livingston, Johnston, Cook, Evans, Schaub, Swine Diet Recommendations, or Practical Swine Feeding Ideas -- alone or in combination, teach or suggest the invention of Claims 1, 9, or 16, particularly a feed ration comprising "0.5 to 5 percent by weight hydrogenated poultry fat." Applicants respectfully assert that the Examiner is using impermissible hindsight to pool elements of Applicants' invention from a plurality of separate references to form the combination of Applicants' invention, where in fact, it is the combination of Applicants' invention that is novel and unobvious. Furthermore, the teaching or suggestion to combine the references becomes less plausible when the necessary elements can only be found in a large number of references, such as that from which the Examiner has raised the § 103 rejection against Applicants' invention. The Applicants respectfully note that they have previously explained to the Examiner how the references fail to disclose the present claims and how, in fact, several of the references teach against the claim elements for which they are being used. The Examiner has not responded to the Applicants discussion and has, instead, merely repeated her rejections.

The Examiner asserts that Livingston teaches animal feeds that contain poultry fat. The Examiner cites only to the Abstract of Livingston to support this assertion. The Applicants respectfully submit that the Examiner takes the Abstract of Livingston out of context of the invention of Livingston as a whole. Livingston teaches an animal feed comprising house litter and wastewater sludges:

The instant invention overcomes the above problems by providing a nutritional animal feed and a process for making the animal feed comprising mixing growing house litter with wastewater sludges and drying the mixture to remove water from the mixture.

In more detail, the house litter comprises a component selected from the group consisting of animal (as used hereinafter, the term

“animal” includes poultry) excrement, feathers, poultry feed, bedding material, and mixtures thereof. Preferably, the litter comprises a component consisting of poultry manure, poultry feed, and mixtures thereof. The wastewater sludges utilized in the invention include a component selected from the group consisting off at [sic], blood serum, bones, skin, viscera, and mixtures thereof. Preferably, the sludges comprise a component selected from the group consisting of poultry fat, poultry blood serum, poultry bones, poultry skin, poultry viscera, and mixtures thereof, and more preferably, the sludges comprise poultry fat. *Livingston, Col. 1, ll. 59 – Col. 2, ll. 10.*

While the sludges of Livingston *may* include poultry fat, Livingston does not teach a feed comprising poultry fat. As the Examiner points out, Livingston does not teach a feed ration comprising hydrogenated poultry fat. It is not clear how, even were it desirable, the poultry fat used in the animal feed of Livingston could be hydrogenated. Livingston combines house litter with wastewater sludges, the wastewater sludges *may* comprise poultry fat. It is not obvious in any way that the poultry fat of the wastewater sludge could be hydrogenated. Therefore, Livingston does not teach a feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat. In fact, the Applicants submit it is improper to use Livingston to suggest something that could *not* be done to the feed of Livingston – even had one decided they wanted to hydrogenate poultry fat that could possibly be in the wastewater sludges of Livingston, such hydrogenation arguably could not be done. The Applicants have repeatedly explained the teachings of Livingston and its inapplicability to the present claims. In lieu of responding to the Applicants statements, the Examiner has merely repeated her initial interpretation of Livingston which, again, does not take the teachings of Livingston in context as a whole.

Similarly, the Examiner asserts that Johnston teaches fat containing animal feeds and further teaches the use of poultry fat. Johnston teaches animal feed and, more particularly, pet food. *Johnston, Col. 2, ll. 13-14.* Generally, Johnston teaches adding a combination of at least two to three particular natural antioxidants with animal-fat-containing animal feed to increase the shelf life of the animal feed. *Johnston, Col. 2, ll. 19-23.* The antioxidants are combined with, for example, “refined and bleached poultry (inedible) fat” or “other inedible animal fats.” *Johnston, Col. 3, ll. 1-2.* The amount of antioxidants is based on proportions based on total weight of antioxidant and inedible fat to be protected. *Johnston, Col. 3, ll. 1-24.* Johnston does not teach a feed ration comprising hydrogenated poultry fat. Johnston specifically teaches that

the antioxidants compositions are admixed with animal fat prior to incorporating the animal fat in animal feed (including pet food), which is otherwise prepared in established and conventional fashion. *Johnston, Col. 3, ll. 53-57.* Established and conventional fashion does not include hydrogenating poultry fat. Additionally, Johnston does not teach a feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat. Again, the Applicants have repeatedly explained the teachings of Johnston and how Johnston does not disclose, teach, or suggest the claims. The Examiner has not responded to the Applicants discussion of Johnston.

The Examiner cites to five further references to correct the deficiencies of Livingston and Johnston. Specifically, the Examiner cites to this plurality of references to teach hydrogenating fats, iodine values, or fat percentages.

The Examiner asserts broadly that Schaub teaches hydrogenating fats. Schaub fails to remedy the deficiencies of Livingston and Johnston. In fact, Schaub teaches *away* from the present claims. Schaub teaches fats fed to animals and, more particularly, fats from readily available sources such as lard, tallow, fish, oils, and the like. Schaub specifically teaches hydrogenating fats to provide feeding fats in large quantities:

The purpose of the present invention is to offer the possibility of feeding fat in large quantities, i.e., in excess of about 5%, in a form which does not cause disorders of the digestive process even of ruminants, and which can nevertheless be completely resorbed.
Schaub, Col. 1, ll. 49-53 (emphasis ours).

This is done by “feeding to the animals fats in powdered or particulate form, wherein the fats have a melting point above the body temperature of the animals . . .” *Schaub, Col. 1, ll. 59-62.* That is, “only those fats exhibiting a melting point above the body temperature of the animals to be fed are suitable for preparing the powdered fat according to the invention.” *Schaub, Col. 3, ll. 4-7.* Furthermore, only fats exhibiting a melting point below the body temperature of the animals to be fed are hydrogenated. Schaub teaches that non-hydrogenated fats that exhibit a melting point above the body temperature of the animals to be fed do not otherwise need to be hydrogenated. *Schaub, Col. 3, ll. 25-27.* They may, however, be hydrogenated when they are derived from a mixture including fats that exhibit a melting point below the body temperature of the animals to be fed. *Schaub, Col. 3, and ll. 27-36.* Schaub teaches that by raising the melting

point of the fats exhibiting a melting point below the body temperature of the animals to be fed, “fat portions exceeding 5% can be added and fed in the ration.” *Schaub, Col. 2, ll. 5-6.* In fact, Schaub teaches that “amounts of at least about 5% should be used to take advantage of the unique characteristics of the fat powder of this invention and amounts of up to about 25% or more of the ration are suitable.” *Schaub, Col. 4, ll. 13-18.* Thus, Schaub specifically teaches feeds having fat in excess of about 5% and does not teach a feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat. Accordingly, not only does Schaub not teach each of the claimed elements, Schaub specifically teaches away from a feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat. Again, the Applicants have explained to the Examiner that Schaub teaches ranges outside of the claimed range. From the teachings of Schaub, it appears that the claimed range would be undesirable (“amounts of at least about 5% should be used...”). The Examiner has not addressed the teachings of Schaub *against* the present claims.

The Examiner next refers to Cook. The only statement the Examiner makes about Cook is: “It is known in prior art that the firmness of pork belly is obtained by providing saturated fats in the diet of a pig ... See also col. 1, lines 34-35 in Cook.” *Present Office Action, page 4.* The Applicant respectfully asserts that Cook fails to remedy the deficiencies of Livingston and Johnston. In fact, Cook arguably teaches against an animal feed comprising hydrogenated poultry fat: Cook teaches feeding animals an unsaturated fat.

Cook teaches that the only method previously known to assure a firm fat was to feed animals fats or oils high in saturated fats. The method of Cook specifically comprises feeding meat animals a conjugated linoleic acid, which is an unsaturated fat, which counteracts the adverse effects of the increased unsaturated fat in the diet of meat animals and results in the production of meat of improved quality having a firmer fat. *Cook, Col. 1, ll. 45-50.* Cook specifically teaches a methods comprising feeding animals an unsaturated fat. Cook does not teach a feed ration comprising poultry fat. More specifically, Cook does not teach a feed ration comprising hydrogenated poultry fat. Therefore, Cook does not teach a feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat. The Examiner has not addressed the teachings of Cook *against* the present claims.

The Examiner next cites to Evans. Evans teaches a feed supplement which includes the use of highly saturated fats. Evans specifically teaches that the selected fatty acids should either have an iodine value, or be saturated to the point that the iodine value thereof is, between 5 and 35, and preferably in the range of 16-20. Evans further teaches that certain saturated or highly saturated animal fats such as tallow, lard, and grease are relatively low in value, easier to saturate or hydrogenate, are more readily available, have lower costs than higher iodine vegetable oils, and are therefore more economical in achieving the desired iodine value. Thus, Evans teaches the use of tallow, lard, or grease having iodine values between 5 and 35 in feed supplements. Each of the independent Claims 9 and 16 recite hydrogenated poultry fat having an iodine value of between about 30 and about 60. The Examiner argues that it would be obvious to optimize the iodine values since it is known that the iodine value is a means to measure the degree of saturation required and that the lower the iodine value, the higher the hydrogenation. Given Evans' specific teaching of a range of iodine values between 5 and 35 and the assertion therein that it was a surprising discovery that the addition of highly saturated fats (IV=5-35) to the diet produces significant weight gain rate advantages, it would not be obvious to modify the invention of Evans to a different range of iodine values. Indeed, such modification would be *against* the specific teaching of Evans.

Evans further does not teach the use of poultry fat, and more particular hydrogenated poultry fat. Therefore, Evans does not teach a feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat as recited in Applicants' independent claims.

As noted, each of Schaub, Cook, and Evans potentially teach *against* the present claims. It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983). As previously discussed, Cook teaches feeding meat animals a conjugated linoleic acid, which is an unsaturated fat, which counteracts the adverse effects of the increased unsaturated fat in the diet of meat animals and results in the production of meat of improved quality having a firmer fat. Schaub teaches: "fat portions exceeding 5% can be added and fed in the ration," and that "amounts of at least about 5% should be used to take advantage of the unique characteristics of the fat powder of this invention and amounts of up to about 25% or more of the ration are suitable." *Schaub*, Col. 2, ll. 5-6, *Schaub*, Col. 4, ll. 13-18. Thus, neither Schaub nor Cook can properly be combined with

Livingston, Johnston, or Schaub to make obvious a novel and unobvious combination comprising, in part, a daily feed ration “comprising 0.5 to 5 percent by weight hydrogenated poultry fat” for generating pork bellies having a higher concentration of saturated fats. Evans' specifically teaches a range of iodine values between 5 and 35 asserts that it was a surprising discovery that the addition of highly saturated fats (IV=5-35) to the diet produces significant weight gain rate advantages. Accordingly, Evans does not make obvious and cannot be properly combined to teach “hydrogenated poultry fat has an iodine value of greater than about 35,” as recited by Claim 9 or a feed ration comprising hydrogenated poultry fat “wherein the hydrogenated poultry fat has an iodine value of greater than about 35,” as recited by Claim 16.

Thus, the applicants respectfully assert that not only would it not have been obvious to combine Livingston, Johnston, Schaub, Cook, and Evans to achieve the present claims, it is impermissible to combine, at least, Schaub, Cook, and Evans with any of the other references.

The Examiner cites to two bulletin references to teach fat content of a typical feed and maximum level of fat in a swine diet. The Examiner asserts “It would have been obvious to consider these amounts and optimize it, whether the fat is hydrogenated or not, since fat requirements would be the same.” The Applicants respectfully assert that the Examiner’s statement does not sufficiently give patentable weight to the claimed elements. Whether the fat is hydrogenated or not can have large consequences on the resultant diet – as evidenced by the present application. If the Examiner intends to take official notice of the position that fat requirements are the same whether the fat is hydrogenated or not, the Applicants respectfully request documentary evidence of such position.

The Applicants respectfully submit that the Bulletin References, Swine Diet Recommendations and Practical Swine Feeding Ideas, fail to remedy the deficiencies of Livingston, Johnston, Cook, Evans, and Schaub. The Examiner asserts that the Bulletin References teach that the fat content of a typical feed is in the range 3-5% and the maximum level of fat in a swine diet is 8%. Applicants respectfully assert that the combination of the Bulletin References with either Schaub or Evans is improper because, as a first matter, there is no reason, suggestion, or motivation found in the these references, whereby a person of ordinary skill in the field of the invention would make the combination. The Examiner is respectfully

reminded that “[t]here must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination” and “[t]hat knowledge can not come from the applicant's invention itself.” *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992).

The Bulletin References generally disclose the incorporation of animal fat into pig feed. Importantly, neither of the Bulletin References teach incorporation of hydrogenated animal fat, particularly the percentage by weight of hydrogenated animal fat, and more particularly hydrogenated poultry fat. There is no motivation in the art, nor does the Examiner cite such motivation, to combine references disclosing the use of fat in animal feed, generally, with those that disclose feeds incorporating hydrogenated fats. Indeed, Evans generally teaches away from the use of fat in pig feed. Evans, as previously discussed, teaches that “pork obtained from swine which have been subjected to a diet containing a supplement of unsaturated fats alone,” has been found to suffer severely in quality. *Evans et al.*, Col. 1, ll. 50-65. Furthermore, Schaub discloses suitable animal feed rations with a hydrogenated animal fat content of up to about 25 % or more by weight. *Schaub*, Col. 4, ll. 17-18. Such a teaching directly contradicts the teachings of the Bulletin References, which disclose feeds should have a maximum animal fat content of 8%. Accordingly, a person of ordinary skill in the field of the invention would not have any reason, motivation, or suggestion to make such a combination.

Accordingly, none of the references -- Livingston, Johnston, Cook, Evans, Schaub, Swine Diet Recommendations, or Practical Swine Feeding Ideas -- alone or in combination, teach or suggest a daily feed ration comprising 0.5 to 5 percent by weight hydrogenated poultry fat, and therefore, the invention of Claims 1, 9, or 16. Claims 2-8 and 21-23, which depend from Claim 1, incorporate all the limitations of Claim 1. Claims 10-15, which depend from Claim 9, incorporate all the limitations of Claim 9. Claims 17-20, which depend from Claim 16, incorporate all the limitations of Claim 16. Thus, Claims 1-23 are not made obvious by Livingston, Johnston, Cook, Evans, Schaub, Swine Diet Recommendations, nor Practical Swine Feeding Ideas, alone or in combination.

Claim Objection

Claim 23 was objected to as being dependent upon a rejected base claim. The Applicants thank the Examiner for her indication of allowability of Claim 23 but respectfully submit that the claims from which it depends are also allowable.

Conclusion

This application now stands in allowable form and reconsideration and allowance is respectfully requested.

This response is being submitted on or before September 17, 2007, with the required fee of \$120.00 for a 1-month extension of time, making this a timely response. It is believed that no additional fees are due in connection with this filing. However, the Commissioner is authorized to charge any additional fees, including extension fees or other relief which may be required, or credit any overpayment and notify us of same, to Deposit Account No. 04-1420.

Respectfully submitted,

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